

a first high-frequency electric power applicator that applies high-frequency electric power to said discharge electrode;

a magnetic force line generator that generates magnetic force lines having portions roughly parallel to a center axis of said discharge electrode, such that the length of said parallel portions becomes longer the closer said magnetic force lines are to said center axis, said magnetic force lines being capable of trapping electrons; and

two walls positioned so as to sandwich said plasma generation region between them, in said center axis of said discharge electrode, for defining the scope of said plasma generation region in said center axis, wherein said magnetic force lines that pass through a center of said plasma generation region are shaped so that they do not intersect said two walls.

6. (Amended) The plasma generation apparatus according to Claim 4 or 5, wherein, the other of said two walls is used as a holder for holding an object to be treated.

14. (Twice Amended) The plasma generation apparatus according to Claim 1, comprising a position adjuster that adjusts positions of said two walls in said center axis of said discharge electrode.

16. (Thrice Amended) A plasma generation apparatus comprising:  
a vacuum vessel having a plasma generation region established in the interior thereof;  
a gas inductor that inducts discharge gas into said interior of said vacuum vessel;  
an exhaust that exhausts the atmosphere in the interior of said vacuum vessel;  
a tube-shaped discharge electrode fashioned so as to enclose said plasma generation region;

a first high-frequency power applicator that applies high-frequency electric power to said discharge electrode;

a magnetic force line generator that generates magnetic force in said plasma generation region;

two walls, formed of a substance exhibiting electrical conductivity, and positioned so as to sandwich said plasma generation region between them, in a center axis of said discharge electrode, for defining the scope of said plasma generation region in said center axis, wherein a substrate is located between said two walls; and

a second high-frequency electric power applicator that applies high-frequency electric power to at least one of said two walls.

17. (Amended) A plasma generation apparatus comprising:

a vacuum vessel having a plasma generation region established in the interior thereof;

a gas inductor that inducts discharge gas into said interior of said vacuum vessel;

an exhaust that exhausts the atmosphere in the interior of said vacuum vessel;

a tube-shaped discharge electrode fashioned so as to enclose said plasma generation region;

a first high-frequency electric power applicator that applies high-frequency electric power to said discharge electrode;

a magnetic force line generator that generates magnetic force lines having portions roughly parallel to a center axis of said discharge electrode, such that the length of said parallel portions becomes longer the closer said magnetic force lines are to said center axis, said magnetic force lines being capable of trapping electrons; and

two electrodes positioned so as to sandwich said plasma generation region between them, in said center axis of said discharge electrode, wherein said magnetic force lines that pass through a center of said plasma generation region are shaped so that they do not intersect said two electrodes.

18. (Amended) A plasma generation apparatus comprising:

a vacuum vessel having a plasma generation region established in the interior thereof;

a gas inductor that inducts discharge gas into said interior of said vacuum vessel;

an exhaust that exhausts the atmosphere in the interior of said vacuum vessel;

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a tube-shaped discharge electrode fashioned so as to enclose said plasma generation region;

a first high-frequency power applicator that applies high-frequency electric power to said discharge electrode;

a magnetic force line generator that generates magnetic force in said plasma generation region;

two electrodes, formed of a substance exhibiting electrical conductivity, and positioned so as to sandwich said plasma generation region between them, in a center axis of said discharge electrode, wherein a substrate is located between said two electrodes; and

a second high-frequency electric power applicator that applies high-frequency electric power to at least one of said two electrodes.

Please add new claims 19-21 as follows: